APPENDIX A

Specification Evidence Supporting a Showing of Sufficient Written Description of the Claimed Power Source

1. Applicants' specification first indicates in the Background section the need for power sources that do not require external power sources to drive the power source. See the following (direct quotes):

- The increasing use of portable electronics has driven research in the area of *portable* electric generators. (p. 1, lines 14-15). [An implication that external sources of power to run the power supply is a problem that the present invention is addressing.]
- Fitting every sensor with a battery power supply involves the above noted performance limitations of batteries in addition to the high cost of initial installation and periodic replacement. The alternative of hard wiring a large number of sensors to a central supply would improve reliability, but would necessarily involve complex circuitry and cost that make this approach economically unviable. These deficiencies of conventional solutions can be overcome by use of TE power sources such as TE power sources *that produce electric power by harvesting and converting ambient energy in the manner provided by this disclosure.* [An implication that it is ambient air differences that run the new power source devices for the creation of power – not an external electrical and/or mechanical device to run the power source.]
- One potential source of energy for the presently disclosed TE power sources and devices may be found in the differing temperatures that occur naturally in these remote, non-remote and less accessible locations, since thermoelectric devices can generate electric power in response to the existence of a temperature differential across the thermoelectric device. However, since the distances across conventional thermoelectric devices are typically small, heretofore none have been successfully configured to take advantage of the temperature variation between, for example, the ground below and the air above it. (p. 4, lines 19-26). [Another implication that it is only natural temperature differences between ambient air and another part of the environment that run the new power source devices for the creation of power – not an external electrical and/or mechanical device.]

2. Applicants' specification provides embodiments of the presently claimed power source with text and drawings that make it clear there are no external electrical and/or mechanical power sources connected to the claimed power source to drive the claimed

power source and any reasonably person, not just those of ordinary skill in the art, would recognize such from the following:

- With reference to Figure 15 the specification states: "Such a TE power source may include an embodiment of the disclosed thermocouple assembly (TE modules), a heat delivery member and a rejection member (e.g., a low-temperature and a high-temperature heat pipe containing for example condensable fluids), and interfacing electronics including annular electronics, and power conditioning compartments. The heat delivery member and a rejection member may be coupled to the hot and cold junctions or connections of the TE modules. One or both sides of the generator can be heated or cooled by other heat transport methods such as conduction, convection, and/or radiation. One or more sensors or other low-power applications, for example, may be powered by the disclosed power source. (p. 18, ll. 16-27) [A skilled person would yet again see that there is no mention of any electrical or mechanical power device external to the high and low temperature members of the described power source needed to cause the spontaneous heat transfer in the power source.]
- The TE ambient power source embodiment shown in FIG. 15 can produce from power in the range of 100 microwatts to 100 milliwatts, *from small ambient differences in temperature* (e.g., less than about 5ºC, less than about 2ºC, or less than about 1ºC). For example, the disclosed power source embodiment may operate in environments where natural temperature differences exist, such as above and below ground surface, water to air temperature differences, skin to air temperature differences or on either side of ductwork that delivers heating, ventilation, and/or air-conditioning in buildings or appliances. ... Particular embodiments of the TE power sources as disclosed herein can be used *through energy taken directly from the local environment of the application using engineered heat gathering and dissipation components.* (p. 18, l. 29 – p. 19, l. 10) [Yet another implication that it is only natural temperature differences between ambient air and another part of the environment that run the new power source devices for the creation of power – not an unmentioned external electrical and/or mechanical device. Again – there is no mention whatsoever of any need of an external electrical or mechanical power device to run this disclosed power source – nor is there any mention of such anywhere in the application – another obvious indicator to persons skilled in the art that no electrical or mechanical power device external to the described power source is needed to drive the described power source.]
- Figure 15 itself indicates that there is no electrical or mechanical power device external to the high temperature and low temperature heat pipes of the drawn power source. [Possession of the invention may be shown by any description of sufficient,

relevant, identifying characteristics that would cause a person ordinarily skilled in the art to recognize that the inventor had possession.] MPEP § 2163(11)(A)(3)(A).

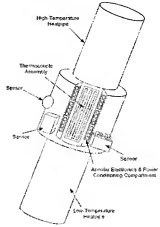

Fig. 15